

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.9/14.3,0.0/1.6File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-000815**Date Inspected:** 03-Nov-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai,China**CWI Name:** Zhu Zhong hai**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** 89 Mock up**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector Tim McClendon arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China to periodically monitor welding and Quality Control (QC) functions. While on site the QA Inspector observed and/or discovered the following.

Zhenhua Port Machinery Company (ZPMC) Magnetic Testing (MT) inspector Cai xin xin Lievl II was performing MT inspection on Partial Joint Penetration (PJP) tack welds on 89 Diaphragm Web Plate p720 to p138-1 weld #55 and weld #58, p138-1 to p721-1 weld #56 and weld #57 and p721-1 p842-1 weld #59 and weld #61 this information can be found on drawing #MUB-MAS21 A/J. Three tack welds were deposited on each weld in the 3G position using the Shielded Metal Arc Welding (SMAW) process. ZPMC Cai xin xin performed MT inspection on all tack welds and accepted all welds except the center tack of weld #55. ZPMC MT inspector discovered what appeared to be a crack the entire length of the weld. Filler metal was completely removed by grinding and MT inspection was performed to insure defects were not present in base metal. It appeared base metal was unaffected due to no indications were found by MT inspection. ZPMC welder Dai Lu certified for the SMAW process began depositing filler metal, after proper preheat was attained, to the area where tack was removed. After completion of tack weld ZPMC Cai xin xin performed MT inspection on newly deposited weld metal and found this tack weld to be acceptable. QA Inspector also performed MT Inspection on all tack welds and no indications which would cause rejection were found. After QA's Inspection, ZPMC welders (A) Dai Lu and (B) Han Xiao feng certified for the SMAW began depositing filler metal to weld #55 and weld #58. The welding procedure being used was WPS-B-T-3312-TC-P5 and the welding parameters recorded by this QA Inspector were, welder (A) Amps 230, Volts 24, Travel Speed (T/S) 137mm/min. Temperature 203c and welder (B) Amps 249, Volts 23,

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T/S 175mm/min. Temperature 199c. The CWI present during this period was Zhu Zhong Hai and the QC was Li Xiu Yang.



Summary of Conversations:

Within body of report.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By: McClendon,Timothy

Quality Assurance Inspector

Reviewed By: Cuellar,Robert

QA Reviewer